

Genius talk or moron babble? The complementarity principle

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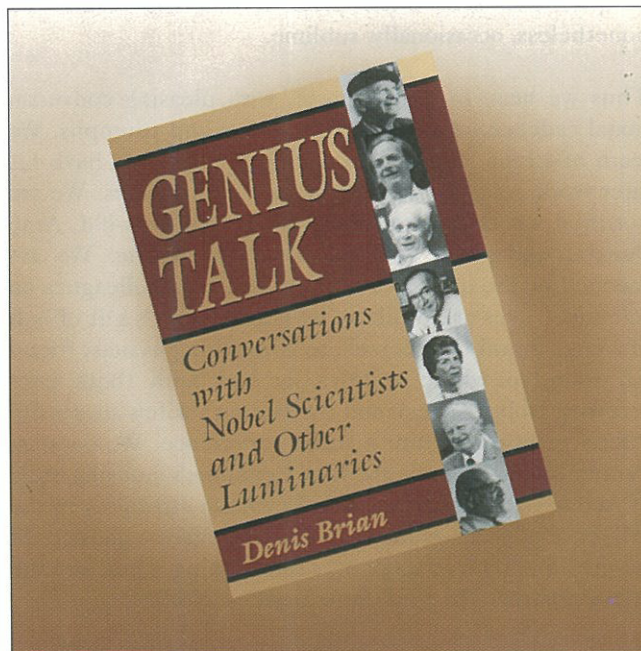
Genius Talk: Conversations with Nobel Scientists and Other Luminaries by Denis Brian, Plenum Press, New York, 1995, 420 pp. \$28.95 (hardcover) ISBN 0-306-45089-5.

Given the chance to ask a distinguished group of science luminaries anything you want, how should you proceed? This is the dilemma facing nonscientist Denis Brian, who authored the Hemingway biography *A True Gen*, in his book *Genius Talk: Conversations with Nobel Scientists and Other Luminaries*. Faced with this quandary one could ask scientists how their trenchant research changed the way man views his universe. Or entice them to recount tales of Einstein, Bohr, and other geniuses they have known. Or suggest they descant on the course of science in our society. And this book, *Genius Talk*, does a bit of all that.

But the most important strategy for concentrating the attention of minds famed for logical deduction from sound data based on years of concentrated effort is to ask them to deliver unfounded opinions on matters for which data is lacking and about which they are not particularly informed. Specifically, one should ask each to expostulate on God, the afterlife, ESP, UFOs and extraterrestrial intelligence, hypnosis, consciousness and, for good measure, whether Oppenheimer got a fair shake; in short, to offer unsubstantiated opinions on matters your garage mechanic is as likely to be right about. This, at least, is the approach adopted by Denis Brian in *Genius Talk*.

Lest you think I exaggerate, of these seven issues, John Wheeler, Charles Townes, Linus Pauling, and Paul Dirac were each asked to opine on, on average, six and a half. The tally on God among queried scientists is: two for, six against. Oppenheimer fares better (see Table). Not surprisingly, when left to rank speculation, renowned scientists are not as a group much more sensible than the rest of us. (Jastrow: "Astronomers may be finding more circumstantial evidence that God does exist.")

A second aberration of Brian — in addition to his fixation on the supernatural — is his choice of scientists. He does an excellent job of identifying physicists, including those above, as well as Richard Feynman and Hans Bethe. But his selections outside that realm are less discerning. Nobelists George Wald, who fathomed important aspects



of the workings of the retina, and Torsten Wiesel, who together with Harvard's David Hubel advanced our understanding of how the cortex of the brain processes what we see, are fine choices. But for much of the collection Brian spurns such signal contributors as Francis Crick, James Watson, Max Delbrück, Erwin Chargaff, and Barbara McClintock (or, perhaps, they all spurned him) to favor, instead, dodgy pseudoscientists in the realms of psychology and social anthropology.

Thus we hear psychoanalyst Murray Sherman pronounce, on the one hand, that latent homosexuality is the root of paranoia. And, on the other hand, that we are all latent homosexuals. So evidently, being human is the root of paranoia. That really narrows it down.

The book's recurrent failing derives from the fact that Brian is not a scientist, does not think like a scientist, and poses questions not of profoundest interest to scientists.

Here is a typical exchange:

Hans Selye: "When [penicillin] was first discovered nobody would have wanted to inject it into human beings because the crude penicillin culture that Fleming had was highly toxic."

Denis Brian: "Are flying saucers outside your field of interest?"

Still, in the rare moments they are not confronting issues of the paranormal, the more substantial scientists at times discourse exquisitely on deeper matters — as, sometimes, does Brian in his biographical insertions: If Brian's choice of questions is at times preposterous, the results are nonetheless, occasionally, sublime.

Thus we hear, in limpid prose, with pleasing conversational cadence, of scientists' tragedies and triumphs. We learn of Linus Pauling's discouraging failure to have his later work accepted or even tested by his peers. We are horrified at the terror suffered by six-year-old Arno Penzias under the sway of the Nazi regime. We are touched by the influence of loved ones and colleagues on scientists' lives and work — by Harold Urey's gift of half of a large award he received, to struggling physicist friend I.I. Rabi, in whose abilities he had faith (both later received Nobel prizes); and by Pauling's wife's successful efforts to foster in him a social conscience. We contrast Pauling's social conscience with Feynman's amusing ethic of Active Irresponsibility; this Feynman attributes to the influence of von Neumann, while to his father goes credit for instilling rigor of thought, a questioning mind, and the conviction that 'To name is to know'— Not!

Between telling tales of their and others' lives and achievements — and expounding upon UFOs and ESP — several illuminati take the time to recount important principles. I now share a selection of such. These precepts can be applied to life, and to this review.

First, Brian's desire to focus on UFOs and suchlike is otherwise incomprehensible, and therefore I chalk it up to 'The Pauli Effect'. The Pauli Effect, referred to by Dirac, is defined by George Gamow as "A mysterious phenomenon which is not and probably never will be understood on a purely materialistic basis."

Next, the 'Complementarity Principle' instructs us that many phenomena can be fully explained only by invoking mutually exclusive principles, or a property and its opposite. It is not surprising, once one has internalized complementarity, that *Genius Talk* is simultaneously meritorious, and — in spots anyhow — meretricious.

Finally, the 'Anthropic Principle' advises us, in the words of George Wald, that "the universe possesses the properties it does in order eventually to produce physicists". I should like to add the Reviewer's Corollary: that physicists were produced to engender writers to interview and biographize them. And writers, in turn, exist to beget books for reviewers to critique. Thus, the universe was created as it was in order to conceive this review.

It remains an open question whether you will be more distressed at the undue emphasis on pseudoscience and its practitioners in *Genius Talk* or more moved by some excellent passages from truly fine minds. How to know? You could simply follow the dictum of Richard Feynman's father: "to have no respect for authority, but to study [the book yourself] from start to finish." For despite a few dyspeptogenic elements, the book offers food for thought and some plain old-fashioned fun. And there were moments when I, for one, felt honored to eavesdrop on these conversations.

Luminaries state their position on God, ESP, UFOs, the Afterlife, and Oppenheimer.

Luminary	God	ESP	UFOs or EI ^a	Afterlife	Oppenheimer ^b	Luminary's Field
Pauling	-	-	-	-	+	Chemistry
Feynman	-	-	-	-	+	Physics
Dirac	-	-	-	?	-	Physics
Weisskopf	-	?	-	-	+	Physics
Wheeler	-	-	-	-	-	Physics
Penzias	?	-	-	-	+	Physics
Jastrow	?/+	+	+(EI)	-	-	Physics
Townes	+	-	-	-	+	Physics
Shawlow	+	?	-	?	-	Physics
Urey	-	?	+(EI)	-	+	Chemistry
Wald	-	?	-	?	?	Biology

^aExtraterrestrial intelligence

^bWas Oppenheimer unfairly treated? + indicates that the luminary thought so.

+ indicates for, - against, ? position unclear, equivocal or undecided.